

ABSTRACT OF THE DISCLOSURE

An apparatus for heating a liquid includes a housing having an internal chamber and a rotor disposed in the chamber. The rotor is preferably cylindrical and operates inside a bore provided by the housing without touching, the shape of the bore preferably being parallel with the exterior surface of the rotor, and a series of openings disposed over the rotor surface. At least one internal passageway in the rotor and elements for: pre-heating some or all the incoming fluid in the chamber; priming the chamber initially; cooling certain temperature sensitive components; injecting fluid into a partially evacuated volume; developing a vacuum state during operation expeditiously.